| (51) International Patent Classification 6 :  F02D 33/02, F02B 37/24 | **A1** | (11) International Publication Number: **WO 97/45633**  (43) International Publication Date: 4 December 1997 (04.12.97) |
|---|---|---|

(21) International Application Number: PCT/GB97/01419

(22) International Filing Date: 23 May 1997 (23.05.97)

(30) Priority Data:
9611015.0      25 May 1996 (25.05.96)      GB

(71) Applicant *(for all designated States except US)*: HOLSET ENGINEERING CO. LIMITED [GB/GB]; St. Andrews Road, Huddersfield HD1 6RA (GB).

(72) Inventor; and
(75) Inventor/Applicant *(for US only)*: CADDY, Stephen, William [GB/GB]; 10 Osprey Drive, Netherton, Huddersfield, W. Yorks HD4 7RG (GB).

(74) Agent: ALLMAN, Peter, John; Marks & Clerk, Sussex House, 83-85 Mosley Street, Manchester M2 3LG (GB).

(81) Designated States: CN, GB, JP, US, European patent (AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE).

Published
*With international search report.*
*Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.*

(54) Title: VARIABLE GEOMETRY TURBOCHARGER CONTROL SYSTEM

(57) Abstract

A control system for a variable geometry turbocharger having a turbine driven by exhaust gas delivered to an exhaust gas inlet of the turbocharger from an engine exhaust manifold and a compressor driven by the turbine to deliver air to an engine intake manifold via an air outlet of the turbocharger. The differential pressure across the engine is monitored, and a closed loop control system adjusts the variable geometry mechanism to prevent the differential pressure exceeding a predetermined limit. In engine braking mode the variable geometry mechanism may be actuated by a signal representative of the exhaust manifold pressure. An override circuit may be provided to control the variable geometry mechanism in the event of the turbocharger rpm exceeding a predetermined limit.